Buy U. S. War Savings Bonds and Stamps

GEOGRAPHIC SCHOOL BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated as a non-commercial institution for the increase of geographic knowledge and its popular diffusion. General Headquarters, Washington, D. C.)

April 17, 1944. Vol. XXII. No. 38.

1. Hungary's Central Location Keeps Nation Embroiled
2. Where Are the Yanks? 8. Iran
3. Great Lakes Ore Traffic a Sign of Spring
4. India War Theater in Manipur Threatens Allied Supply Lines
5. Geo-Graphic Brevities: IJmuiden—U. S. National Forests

Charles Breasted

GIRLS OF IRAN SMILINGLY FACE OPPORTUNITIES THEIR MOTHERS NEVER KNEW

From the era of the Medes and the Persians until the recent reign of Riza Shah Pahlevi, harsh laws cut off the women of Iran from all life outside the harem. Veils have been required for more than 2,000 years. Women were not even counted in censuses. Within the past 15 years Iranian women have been admitted for the first time to schools, restaurants, theaters, and other phases of community life. The *chuddar*, or heavy black veil, has been outlawed. Now primary school through sixth grade is compulsory. High school is neither compulsory nor free, but tuition is low. Some classes are co-educational. Both boys and girls wear school uniforms.

This smiling girl, resident of a mud brick village near Shiraz, finds her own country in some ways as strange and exciting as it appears to the Yanks (Bulletin No. 2).

GEOGRAPHIC SCHOOL BULLETIN

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic School Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Originally entered as second-class matter January 27, 1922; re-entered as of April 27, 1943, Post Office, Washington, D. C., under Act of March 3, 1879. **Copyright, 1944, by National Geographic Society, Washington, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.**

Hungary's Central Location Keeps Nation Embroiled

THE Nazi occupation of Hungary recalls the misfortunes which this European nation endured in the turbulent period at the close of World War I.

Hungary had been fighting on Germany's side as a partner in the old dual monarchy of Austria-Hungary. The nation broke down in September, 1918, in the face of outside pressures and internal conflict. Revolutionists took over the country; and, while Romanian, Czech, and Serb troops were marching into border areas, struggle for control of the government brought socialists, then communists to power. Finally forces of counterrevolution established a regency.

Admiral Ruled Kingless Kingdom

Admiral Horthy, as Regent, ruled from 1920 to 1944 in the name of a monarchy without a monarch. He piloted the ship of state for a nation without seacoast or navy (except for the few Danube River gunboats and armed launches).

Under the terms of the 1920 Trianon Treaty of peace, defeated Hungary, moreover, was limited to a small army of volunteers. It was not until 1939 that the limitation on army size was ignored.

In 1939 Hungary formally joined the Axis. Hungarian forces invaded Yugoslavia and added their strength to the German invasion of the Soviet Union in 1941. Besides the U.S.S.R., Hungary is now at war with the United States, the British Empire, the fighting Czechs, and certain Latin American nations.

In both this and the earlier war, Hungary's shifts of territory have been spectacular. Before World War I, the country had more than 20,000,000 people and an area of 125,609 square miles. By the Treaty of Trianon, the Allied victors cut Hungary down to roughly a third of its former extent and population, taking away large mineral resources and timberlands. Some of these areas had long been rebellious against Hungarian rule. To the young republic of Czechoslovakia were awarded the northern and eastern regions of Slovakia and Ruthenia (the Carpatho-Ukraine); to Yugoslavia went Croatia-Slavonia and the western Banat; Romania obtained rich Transylvania.

So unreconciled was Hungary to these losses that the government carried on for years a campaign of national mourning, with slogans and posters, public speeches and school exercises demanding the return of the ceded areas.

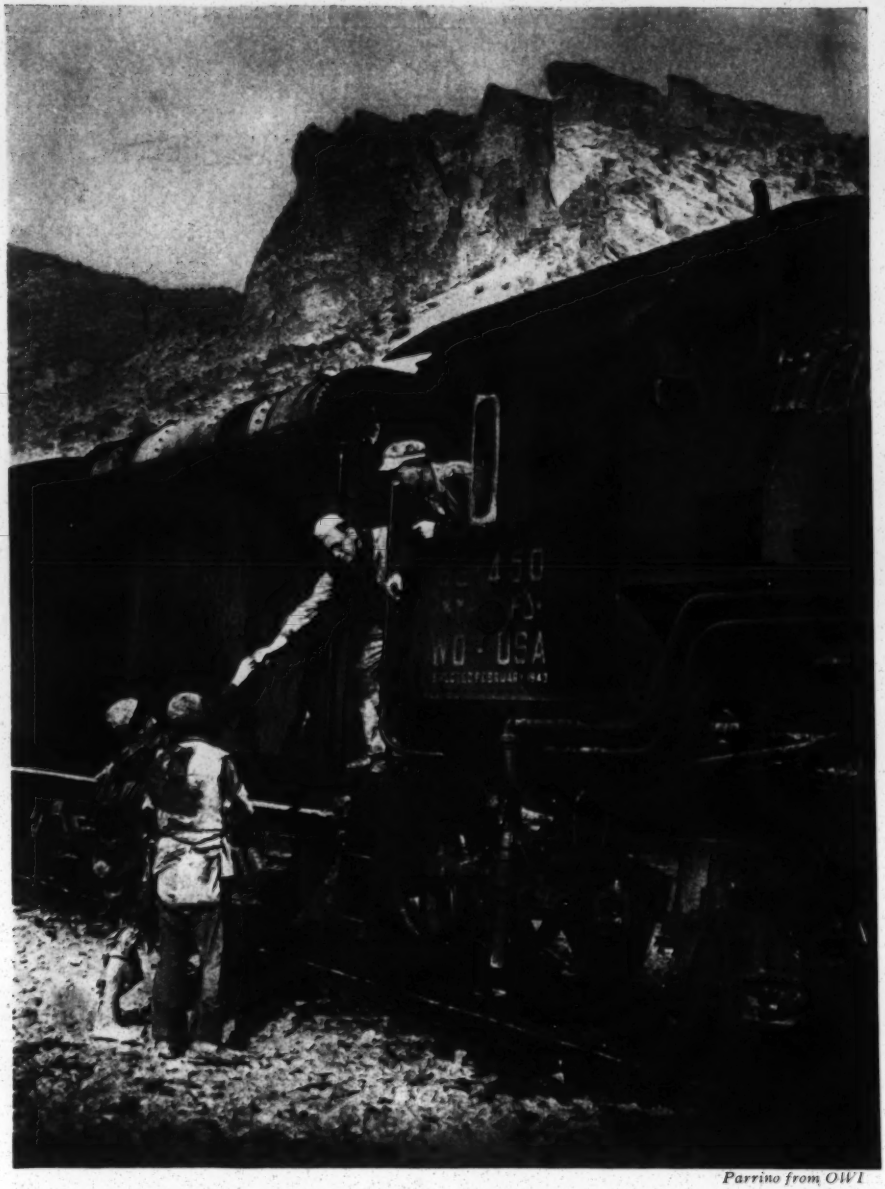
Lost Districts Returned

Association with Nazi Germany seemed to promise Hungary the answer to territorial dissatisfactions, though the return of the lost districts would mean the return also of large numbers of formerly troublesome minority groups.

In 1938-39, partition of Czechoslovakia restored to Hungary parts of western Czechoslovakia, of wild, mountainous Ruthenia, and the fertile farm lands of southern Slovakia. By the end of 1940, nearly half of Transylvania, with its wealth of gold, silver, lead, copper, and zinc, and its fields of natural gas, was returned by Romania under Nazi pressure. In all, Hungary regained territory larger than West Virginia, with a population of roughly four and a half million people —including more than a million Romanians.

The Carpathian Mountains that rim Hungary's recently acquired Ruthenian district and stretch deep into Romania are now on the path of Soviet troops. West of this mountain barrier, the plains of Hungary spread out into open, flat country,

UMI



Parrino from OWI

CASEY JONES HAS HIS HAND ON THE THROTTLE OF THE TRANS-IRANIAN

Iran, whose great travel route was once the old east-west Silk Road that Marco Polo traveled, completed its first cross-country railroad—the north-south Trans-Iranian line—in 1938, after seven years of construction. Since war conditions have made the country a corridor for Lend-Lease shipments, the railroad has been supplied with rolling stock and crews from the United States. This engine, still labeled "U.S.A.," has Persian numerals stenciled beneath its original number. Making its way over several mountain systems, of which the Elburz beside the Caspian Sea is the highest, the railroad skirts mountain pastures where nomads pitch their black tents and watch their flocks. Any unscheduled stop can be an occasion where East meets West, as ragged shepherds make the acquaintance of American train crews (Bulletin No. 2).

GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Where Are the Yanks? 8. Iran

(This is the eighth in a series of articles about the regions where American service men and women are stationed.)

WARTIME Iran passes the ammunition to Russia. In this Middle East land of Omar Khayyám and the Peacock Throne, modern military construction has changed the face and habits of a nation.

Highways and railways have been extended and improved. United States Army technicians and troops have enlarged ports, built housing, set up plants to assemble planes, trucks, jeeps, and other vehicles. Iran's highways are flecked with convoys of trucks assembled and loaded on the spot. Its skies are dark with planes to be turned over to Soviet pilots.

A whole railroad system has been transferred to Iran, complete with locomotives, freight cars, and working personnel (illustration, inside cover). Thousands of Iranians have joined the construction and transport force; many have swapped the flowing robe and sheepskin jacket for the overalls of mechanics and drivers.

To keep out the Germans and keep open the road for fighting tools to reach the Russian front, British and Soviet forces occupied Iran in August and September, 1941. The next year Americans moved in to help deliver desperately needed war materials to Russia's back door.

Land Bridge Between Allies

Iran thus has become the only country where United States, British, and Soviet armies meet in daily contact. In its capital, Tehran, was held the historic conference of November, 1943, at which the leaders of the "big three" nations, among other statements of policy, repledged the postwar independence of Iran.

Iran (or Persia, as it was known before the region's old name was revived in 1935) is one of the world's key areas. In the middle of the Middle East bridge of nations that links Europe with central Asia, it is nearly two and a half times the size of Texas and holds an estimated fifteen million people (map, next page). Its annual output of 80,000,000 barrels of oil provides precious power and lubrication for Britain's Mediterranean and Indian Ocean fleets, and for the planes, tanks, and transports of Middle East operations.

To the Yanks assigned the job of getting the materials through from the Persian Gulf to Russian receiving stations in the north, Iran presents a medley of East and West, ancient ways and modern magic of the machine age.

Although war activities have brought more dramatic changes, westernizing influences were at work years ago. Women began throwing off their shackles (illustration, cover). Many Iranian towns went modern. New power plants, cotton and jute mills, sugar, tobacco, and cement factories were built. Machine tools, automobiles, trucks, and planes were bought in exchange for Iran's oil, rugs, fruit, cotton, hides, and opium.

Cross-Country Railway 860 Miles Long

The former Shah, who abdicated in favor of his son after the 1941 occupation, had made a hobby of big-scale construction. Under this ruler, the "Most Lofty of Living Men" and "Agent of Heaven," the ambitious project of the Trans-Iranian Railway was completed.

About 860 miles long, this single-track line streaks across desert and mountain from the head of the Persian Gulf to the Caspian Sea. On its way it ducks into more than 200 tunnels, crosses thousands of bridges, and in some places winds so sharply it can be seen at three different levels. Over these rails Uncle Sam's Persian Gulf Command now speeds much of the Russia-bound supplies—from barbed wire to boots and beans; from tanks, tommy guns, and explosives to sweaters and skim milk (illustration, inside cover).

Yet Iran still holds the flavor of the old East, from the lonely shepherd on the mountainside to the crowded, covered bazaars where bearded merchants bargain over products of Oriental handicraft. As Mitchell bombers fly over, a nomad with a hawk on his wrist looks up respectfully. Army trucks rumble across pontoon bridges resting on river boats of ancient design, and race by baked-mud villages whose outlines were old a thousand years ago.

Strange to Yank visitors are many Iranian customs—the still sheltered lives of women, the Moslem taboos against alcoholic drinks and dogs; their particular rituals of prayer and fasting. After American diet, an Iranian dinner may seem odd, with its rice and chopped nuts, broiled lamb curled around the skewer, the sweet, heavy pastries, and delicate fruits.

UMI

broken only by the north-south course of the Danube and the Tisza.

Hungary lies at the Balkan back door of Germany. The Danube, cutting through the heart of the country, is a natural corridor leading from the Balkans into Austria, and beyond into the center of Nazi-held Europe. From all directions, railways converge at Budapest, making Hungary a center for communications between Balkan nations and middle Europe.

As an Axis partner, Hungary has served the Nazi cause economically by supplying valuable food, including wheat, corn (illustration, below), livestock, eggs, and poultry, along with war-useful minerals and wood.

Like other satellite nations, Hungary has found increasing difficulties in obtaining promised exchange shipments from Germany. However, this country, again like the other nations forced into economic arrangements with the Germans, recently granted additional credit to the Nazis.

Note: Hungary is shown on the Society's Map of Central Europe and the Mediterranean. See also "Magyar Mirth and Melancholy," in the *National Geographic Magazine* for January, 1938*; "Sunday in Mezokövesd," April, 1935*; "Budapest, Twin City of the Danube," and "Hungary, a Kingdom Without a King," June, 1932*; and "Hungary: Monarch-less Monarchy Ruled by Fleet-less Admiral," in the GEOGRAPHIC SCHOOL BULLETINS, April 8, 1940. *(Issues marked with an asterisk are included in a special list of magazines available to teachers at 10¢ each in groups of ten.)*

Bulletin No. 1, April 17, 1944.

© Publishers' Photo Service

ALIEN CORN IS QUITE AT HOME IN HUNGARY

While wheat is the grain that grows over the greatest acreage in Hungary, corn ranks next—that relatively recent Indian immigrant from the New World. Before the war, Hungary had about 3,000,000 acres of cornfields. Husking bees in peacetime can be as festive in Hungary as they were in early American days when the neighbors congregated to help. For their outdoor husking, this family of the village of Mezokövesd has turned out in a variety of costumes, ranging from the traditional to the exotically modern. Typical Mezokövesd features are the tall derby of the young man (center) and the embroidered apron of the woman (left). Grain has been one of the exports which Hungary supplied to Axis partners.

GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Great Lakes Ore Traffic a Sign of Spring

SIGHTING the season's first ore boat on the Great Lakes is like seeing the first robin—it means that spring is just around the corner.

Breakup of ice heralds the movement of iron ore from mines in Minnesota, Wisconsin, and Michigan to blast furnaces for conversion into steel. Normally the Great Lakes are open for traffic by April 1, and they remain ice-free for seven to eight months. When the ore freighters are able to leave their home ports, life begins to stir at open-pit mines, ore docks, and storage yards.

Ore boats are a specialized type of vessel. In effect, they are long, low, self-propelled, flat-topped steel bins, fitted with numerous hatches so that mechanical loading or unloading devices can work the entire hold at the same time. Crew quarters are provided forward and aft of the stretch of hatches.

Minnesota's Pockets Lined with Iron

Iron is the mother of steel—the fighting fiber of tanks, guns, ships, and munitions; the durable tissue of modern civilization. Steel mills in the United States required 89,000,000 tons of iron ore last year, a record for the industry.

Iron-bearing areas of the Lake Superior region include the Mesabi, Cuyuna, and Vermilion in Minnesota; the Marquette in Michigan; the Menominee and Gogebic in Michigan and Wisconsin.

Richest ore pockets in the United States are in Minnesota's Mesabi Range, an iron-cored ridge paralleling the western shore of Lake Superior for 100 miles. Broken with wind gaps and water gaps, the ridge is a freakish chain of hills, 200 to 500 feet high.

Named "Giant" by the Indians, the range is set in a country green with balsam, pine, and spruce forests, dotted with lakes, alive with fish and game. Since iron was wealth for the white man, the face of the earth the Indians knew has been made over by power shovels, giants in their own right with their ten-story booms.

Machines Work Against Time

Dynamite blasts shake down the ore-crammed earth in the path of the shovels. Squatting on the colored ground, they bite into the lumpy mass, gnaw away from morning to night. In some places they have eaten their way to depths that could swallow a twenty-story building, and have chewed out spaces big enough for several football fields.

At one bite a steel-toothed monster can gobble 16 tons of the red, black, blue, and purplish ores. It fills a freight car with four scoops. It gouges out enough ore in an eight-hour stint to load a 12,000-ton ore freighter. Railroad tracks are built to the shovel's working area, and are lengthened as the shovel clears a path and advances.

Cars are filled by the shovel's dipper swinging up the ore. Whole trains of ore cars are rushed to the lakeside. They are weighed in motion as they begin their dash to the docks.

Into the lakeside yards the ore train rumbles for classification of its laden cars. Sorted, the cars are run out on tracks atop the loading docks, into whose hoppers they drop the ore (illustration, next page). Hatches open, the moored ore boat takes aboard its freight through adjustable chutes dangling from the hoppers.

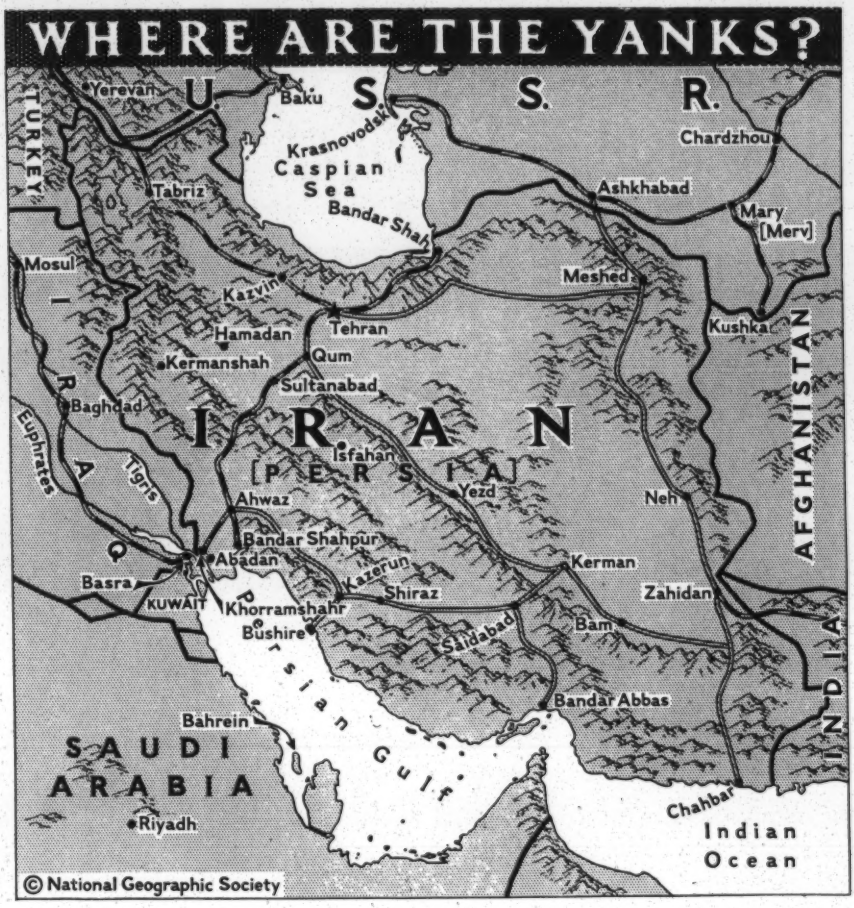
The freighter hustles its ore to the lake port nearest the furnaces it serves, and

UMI

To the boy from Brooklyn or Chicago, contests between fighting partridges, wild boar hunting, gazelle chasing in a jeep are exotic sports. Less pleasant are Iran's extremes of heat and cold, dust storms and humidity, flies and scorpions. Salt tablets and makeshift air-conditioning machines are in order where summer temperatures range up to 130 degrees in the shade, and a man can burn his fingers on a piece of metal exposed to the sun. Sleeping bags are welcome on the high plateau, where winds are piercing cold and shrill.

Note: Iran is shown on the National Geographic Society's Map of Asia and Adjacent Areas. For additional information, see "Iran in Wartime," in the *National Geographic Magazine* for August, 1943; and "Old and New in Persia," September, 1939*.

Bulletin No. 2, April 17, 1944.



OMAR'S LAND OF ROSES AND RUGS NOW DEALS WITH REFINERIES AND RAILS

Iran, the name resurrected in 1935 to replace Persia, comes from the same root as "Aryan." This country, three times as large as France, is roughly one-third desert, one-third bare gray mountains, and one-third fertile fields of cotton, poppies, wheat, melons, and rice. The Great Salt Desert occupies the 300-mile-long depression in the east. Tehran, the capital, is the largest city, with a quarter-million people. Tabriz and Meshed rank next in size, followed by Shiraz, Isfahan, and Hamadan, with about 100,000 each. Isfahan and Kerman have worldwide fame as rug centers. Qum and Yezd have local importance as holy cities. Omar Khayyám in his *Rubaiyat* described a land of roses and wine, caravans and song. Now the country is known for its oil fields, its oil refinery at Abadan, and its cross-country railroad. Iran is a keystone nation with many neighbors—India, Afghanistan, the U.S.S.R., Turkey, Iraq, Saudi Arabia, and a half-dozen small Arab states.

GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

India War Theater in Manipur Threatens Allied Supply Lines

JAPANESE invasion of Manipur has opened up a new World War front in a remote feudal state at the back door of India.

Manipur lies far inland, about halfway along the broad mountain range that separates Burma from India. Roughly oblong in shape, Manipur is bordered on the east by Burma and on the west by the province of Assam in India. Its wartime significance is in the fact that through its wide central valley runs a road that leads to Allied rail and highway routes connecting India, northern Burma, and China.

British Helped Repel Burmese Invaders

Manipur, with an area of 8,600 square miles, is a little smaller than New Hampshire. As an Indian State, it is normally ruled by a rajah who is subordinate to the British governor of adjacent Assam.

British influence in this region was not felt until after the middle of the 18th century when Manipur rajahs on several occasions called for help against invading Burmese tribes. At various times since then uprisings by the hill tribes, struggles over succession within the Manipur royal family, and revolts against the drafting of labor battalions (such as occurred during the first World War) have brought sharp conflicts between British authority and the inhabitants.

Manipur has a wide central valley of some 650 square miles bordered by a tumbled mass of hills and centered by Loktak Lake, 25 square miles in area. Of the numerous streams which water the region, the Barak is the most important. The country is blanketed thickly in spots with jungle grass and forests of pine, teak, and oak. Among backdrop scenic effects in this wild and picturesque new battle theater are thatched huts smothered in clumps of bamboo and giant ferns; rice fields clinging in terraces to steep hillsides or drowned in flat patches of liquid mud; wild geese, ducks, and partridges flying over shallow, marsh-rimmed lakes. To the north rise the Naga Hills which include Assam's highest peak, Mt. Japvo (9,890 feet). The Lushai Hills wall in Manipur on the south.

In addition to farming, the Manipuris work on raised dirt roads; fish with nets for small fry; carry out traditional religious rites of ceremonial dances, attired in elaborate costumes. The women crown their straight black hair with fantastic ornaments of paper and tinsel. Manipur polo enthusiasts on sturdy native ponies play their rough and ruleless game. Also played elsewhere in India, polo was adopted—and adapted—by the British.

Imphal a Road Junction

Imphal, Manipur's capital and potential supply center for Allied troops in northern Burma, is situated about 35 air miles west of the Burma frontier, midway between Chittagong and Ledo. Consisting of a group of villages with a prewar population of more than 85,000, it sprawls in the heart of the Manipur valley.

Manipur's chief road (the only one of consequence into Burma) follows the wide trough between the mountains; through Imphal it curves northward to Kohima, thence northwest to meet the Chittagong-Sadiya railway. Surfaced for year-around use but occasionally washed out during the rainy season between June and October, this 134-mile road has in recent years seen a growing truck traffic that has pushed the old bullock carts out of the picture.

From Imphal, another important road runs westward to Silchar, on the rail-

UMI

yields up its cargo to 15-ton clamshell buckets dipped into its hold by cranes. In about four and a half hours the clamshells have stripped the hold of its ore filling, which is dumped into bins for weighing.

Cars headed for storage yards near the furnaces run under the bins and quickly receive their load of 70 tons of ore. A 15,000-ton cargo can be hauled away in 215 cars.

Duluth is the head of the ore movement.

Note: For additional information, see "Metal Sinews of Strength," in the *National Geographic Magazine* for April, 1942.

Bulletin No. 3, April 17, 1944.

Clifton Adams

THE LOADING DOCK'S TEAPOT SPOUTS SERVE ORE TO MANY SHIPS AT ONCE

Typical of the special equipment which speeds ore shipments on the Great Lakes is this loading dock at Marquette, in Michigan. Railroads bring trains of ore cars to the shores of Lake Superior at Marquette. Cars are sorted so that those bearing the same grade of ore will dump their freight into the same compartments of the loading dock; the graded ore will go into the same compartments of the ore boats, and thus save the time of grading at the furnaces. From the overhead bins, the ore pours into the ship's hold through adjustable spouts like a teapot's; the spout is lowered to a hatch on the ship's deck, and at a signal the ore cascade starts. Several spouts can fill the ship's several compartments at the same time. In an hour or so a 15,000-ton freighter can be fully loaded. The long dock's many spouts could fill a row of ships simultaneously. Instead of having crew quarters in the center, the ore freighter has superstructures fore and aft, with a wide central expanse for hatches.

GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)
General Headquarters, Washington, D. C.

Geo-Graphic Brevities

IJMUIDEN, NAZI E-BOAT NEST IN THE NETHERLANDS

IJMUIDEN, little port on the sand-hills coast of the Netherlands opposite Amsterdam, last month received the heaviest load of explosives delivered up to that time by American medium bombers. It was singled out for that attention because it has become one of the outstanding nests for swift Nazi torpedo boats that dash out to attack British shipping in the North Sea.

In peacetime, IJmuiden was famous as entrance to one of the world's most important commerce canals and site of a canal lock that ranked with the largest in existence. The town's little harbor sheltered in prewar days not E-boats, but scores of "F-boats"—an important fraction of the Netherlands fishing fleet. From the town trainloads of refrigerated fish went daily to markets in Belgium, France, and Germany.

The North Sea Canal which meets the sea at IJmuiden was one of the great engineering accomplishments of the 19th century. By its construction between 1865 and 1876, Amsterdam—which was losing ground as a world port because of the silting of the Zuider Zee—was enabled to open its docks to ships much larger than any it had previously received. The canal is about 18 miles long, 400 feet wide, and 40 feet deep. For the three miles nearest the sea it is carved through sand hills. Into it in peacetime passed transatlantic ships, a stream of great liners from the Netherlands' rich island colonies in the Far East, and tramp steamers, large and small, from all the world.

The great lock, which made it possible for such large ships to pass, is 1,300 feet in length and 165 feet wide. At high tide incoming ships were lowered to the level of Amsterdam's harbor, sometimes a drop of several feet. Since the outbreak of the war no injury has been reported to this vital lock and its smaller companions which help to hold back the high waters of the North Sea from the Netherlands' low country.

Many prewar airplane passengers between England and Amsterdam's famous Schiphol Airfield flew over IJmuiden. They looked down on the two long seaward-stretching piers protecting the approach to the canal, on the neat Dutch homes strung along the coastal sand dunes, and the business section along the south side of the canal's widened mouth, its docks crowded with fishing craft. A quarter-mile inland they could see the locks, and beyond, in a relatively straight line, the great canal sweeping out of the hills and across the flat landscape to the Netherlands' greatest city.

Note: IJmuiden may be located on the Society's Map of Central Europe and the Mediterranean.

For additional information about the Netherlands, see "Behind Netherlands Sea Ramparts," February, 1940*; "A New Country Awaits Discovery," September, 1933; and "Vacation in Holland," September, 1929*.

* * * * *

NATIONAL FORESTS YIELD GAME ALONG WITH TIMBER

NATIONAL forests are serving Uncle Sam as larders as well as timber reserves. Hunters added last year more than two hundred million unrationed pounds of wild meat to the nation's food supply. Annual value of the wild-life meat "crop" from national forest lands is now about $56,630,000.

UMI

road. On its way it crosses five mountain ranges and traverses frequent rivers and gulches on swaying, hazardous suspension bridges.

Manipur's population of around a half-million includes the more or less wild and independent hill tribes of Kukis and Nagas. The latter, as recently as 1941, paid head-hunting fines (illustration, below). In the main valley live the Manipuris, who were converted to Hinduism about two centuries ago and are strict in observance of religious practices.

Manipur women, like those of Burma, enjoy freedom and independence. For the most part, they choose their own husbands. They go unveiled, and to a considerable extent run the business affairs of the family. In the big market at Imphal as in smaller village bazaars elsewhere, women display such wares as home-produced cotton and silk cloth, wood carvings, and leather articles.

The Manipuris do not eat meat, but the Nagas seem especially fond of it. In the Naga sections of the markets, baskets of puppies and kittens are often offered for sale as food, along with pigs and fowls.

Note: The Burma-India region where Allied forces and Japs are fighting may be found on the Society's Map of Asia and Adjacent Areas.

For further information, see "Burma: Where India and China Meet," in the *National Geographic Magazine* for October, 1943; "Burma Road, Back Door to China," November, 1940*; and "Working Teak in Burma's Forests," August, 1930*; and the following GEOGRAPHIC SCHOOL BULLETINS: "Burma of the Peacocks, India's Eastern Flank," March 23, 1942; and "The India Road to China, a Burma Road Substitute," March 16, 1942.

Bulletin No. 4, April 17, 1944.

Pix

THE HEAD-HUNTER'S HORN ADDS TO BATTLE DIN IN INDIA'S NAGA HILLS

This tribesman of India's embattled Naga Hills, north of Imphal, is blowing on a curved and slightly flattened water buffalo horn to summon neighbors for a hunting expedition—possibly for human heads, as the Nagas, a ferocious people, cling to their ancient customs—or perhaps for less gruesome game such as the horned pheasants or flying lemurs of the region. The white band circling his bowl-cut hair is finished at the base of his brain with a chic knot which apparently did not grow on his head. It may be red goats' hair, one of the Nagas' favorite ornaments, with which they also decorate their spears. The dozens of bracelets which adorn his arms, the triple strand of beads about his neck, and the tasseled earplug indicate that, according to local standards, he is almost overdressed, as the Nagas are enthusiastic nudists.

Big-game population of the national forests has increased more than three-fold in the past twenty years, to an average of six animals to the square mile.

Most numerous are deer (illustration, below). Elk rank next, then black bears, antelopes, mountain goats, bighorn sheep, moose, grizzly bears, Alaska brown bears, and wild boars.

National forests, if lumped together, would have a total area about one and one-third times that of Texas.

States which include the largest tracts are California, Idaho, Montana, Oregon, Colorado, Arizona, Washington, New Mexico, Wyoming, and Utah. Alaska ranks after Idaho in area administered by the Forest Service.

Bulletin No. 5, April 17, 1944.

H. F. Mielenz

"RUN, DEER, RUN" IS NO GAME FOR THE WHITETAIL

This parade of whitetails loping over a white trail in the Nicolet National Forest may be running from wolves or toward food, but not for fun. Wisconsin's winter is hard on the Virginia deer, or whitetail. Through the long, cold months he nibbles on swamp alder and on the bark and needles of the spruce trees (background). By springtime, on this inadequate diet, he is an easy victim to pneumonia and wolves. Conservation authorities then provide hay which is a spring tonic for Whitetail and his family. The male loses his antlers in the winter and thus is indistinguishable from his wives and sisters as he rushes along through the slender leafless birch trees and spiky bushes. The Nicolet National Forest was created in 1936 on a tract of 985,400 acres in northeastern Wisconsin.

UMI